

## CLAIMS:

We claim:

- 1 1. An apparatus for providing an output voltage, comprising:
  - 2 an output circuit being adapted for outputting an output signal having a first signal
  - 3 range, said output circuit comprising a first part and a second part, each of
  - 4 said first part and second part having an input terminal, wherein each of said
  - 5 first part and said second part of said output circuit is connected at one side to
  - 6 third voltage level and said first signal range being between a third voltage
  - 7 level and a fourth voltage level; and
  - 8 at least one input circuit, said at least one input circuit being adapted for inputting an
  - 9 input signal having a second signal range and at least a two-level strobe
  - 10 voltage, said input signal comprising at least a two-level input voltage, and
  - 11 second signal range being lower than said first signal range, said at least one
  - 12 input circuit being further adapted for setting a first at least one of said input
  - 13 terminals to a voltage level related to said input voltage when a strobe voltage
  - 14 is set to a first voltage level, and said input circuit being further adapted for
  - 15 electrically isolating a second at least one of said input terminals when said
  - 16 strobe voltage is set to a second voltage level, wherein said second at least
  - 17 one of said input terminals may include said first at least one of said input
  - 18 terminals, said at least one input circuit further comprises:
    - 19 a switch, said switch having a first end connected to said third voltage level
    - 20 and a second end connected to a third at least one of said input
    - 21 terminals and said switch being adapted for setting said third at least
    - 22 one of said input terminals to said third voltage when the switch is
    - 23 active; and
    - 24 a one-way conducting element, said one-way conducting element connected
    - 25 to said third at least one of said input terminals and to said second end

26 of said switch and said one-way conducting element being adapted for  
27 setting said third at least one of said input terminals to a voltage level  
28 lower than said third voltage level when said switch is inactive,  
29 wherein said third at least one of said input terminals may include one  
30 of said first at least one of said input terminals and said second at least  
31 one of said input terminals.

1 2. The apparatus as recited in claim 1 further comprises:  
2 a cholesteric liquid crystal display; and  
3 a driving circuit, said driving circuit for driving said cholesteric liquid crystal display,  
4 wherein said driving circuit includes said output circuit and further includes  
5 said at one input circuit.